

ARTICLE APPEARED
ON PAGE B15

THE WASHINGTON POST
15 September 1980

JACK ANDERSON

South Africa's Secret Uranium Process

South Africa is sitting on one of the hottest military secrets of the Nuclear Age: a cheap, efficient process for obtaining U-235, the radioactive form of uranium used in weapons.

The South African government has guarded its secret jealously from the United States, though not, apparently, from other friendlier nations. As a result, U.S. espionage agencies, particularly the CIA, have been trying every trick in the book to pry the process loose.

"We have as much as told them we know they've got it behind the garage door and we're after it," one CIA source told my associate Dale Van Atta. "We've done everything but go up to the door, bang on it and demand they turn it over."

While this straightforward approach has not actually been contemplated, the intelligence agencies have attempted more clandestine methods. One technique was covert aerial photography of South African nuclear installations. This was done by installing a camera under the copilot's seat on the Beechcraft plane that flies the American ambassador around.

The South Africans soon caught onto this rather rudimentary device, and expelled the pilot, the copilot and the ambassador's military attache.

The CIA also tried human penetration. Possibly inspired by the Pakistani scientist who stole nuclear bomb secrets from the Western European nation he was working

for, the CIA tried to persuade an American nuclear physicist to go to work for South Africa. The scientist, a distinguished alumnus of the Lawrence Livermore laboratory in California, turned the spy agency down. "He didn't want to get killed," a source explained.

The CIA is still trying to ferret out the South African secret, and here's why: The key step in building a nuclear bomb is the extraction of U-235 from uranium ore. Usually there's less than 1 percent U-235 in the ore, so extraction has been a costly process until now.

The United States uses an old but reliable method of extraction called gaseous diffusion. This entails moving the uranium through miles of buildings.

The South Africans achieve the same result in a single room. Their secret process is called "split-nozzle gaseous diffusion," according to intelligence sources.

A second reason the United States wants South Africa's nuclear secret — and thus have a hand in controlling its use—is that the South African government is believed to be sharing its process with other countries.

According to intelligence analysts, an informal alliance has taken shape between South Africa, Israel and Taiwan to produce a nuclear bomb. All three are beleaguered "underdog" nations surrounded by enemies of overwhelming numerical superiority.

The CIA and the National Security

Agency became aware of the cooperation between Israel and South Africa when sensitive Israeli weaponry began turning up in South Africa.

Intelligence sources believe that South Africa has shared its one-room extraction process with Israel and Taiwan—and that the three embattled nations already may have tested a nuclear bomb.